CREDIT

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One has only to turn to the discussions on currency and credit which have accompanied the great development of England's commerce during the last half-century to see how the changing needs of an advancing society evolve new problems for the economist, and call forth new growths of economic doctrine.—Cairnes, *Character and Logical Method of Political Economy*, p. 39.

AUTHORITIES

A. Wagner, "Der Credit," *Schönberg's Handbuch*, 3d ed. (1890), Vol. I, pp. 379-415; *ibid.*, "Grundlegung der pol. Oecon." (1892), pp. 344, 345; E. von Philippovich, *Grundriss der politischen Oekonomie* (1893), Vol. I, § 99, p. 196; A. Held, *Grundriss für Vorlesungen über Nationalökonomie*, 2d ed. (1878), § 12, pp. 61, 62; J. Conrad, *Grundriss zum Studium der politischen Oekonomie*, I. Theil, "Nationalökonomie" (1896), § 28, "Das Wesen des Credites;" A. E. F. Schäffle, *Das gesellschaftliche System der menschlichen Wirthschaft*, 3d ed. (1873), Vol. II, p. 310; W. Roscher, *Grundlagen der Nationalökonomie*, 20th ed. (1892), § 94, pp. 241-4; C. Knies, *Geld und Credit*, "Der Credit," 2d ed. (1879), 2 vols., pp. 376, 478; G. Cohn, *Grundlegung der Nationalökonomie* (1885), § 416, pp. 550-52; M. Block, *Le progrès de la science économique depuis Adam Smith*, 2d ed. (1897), Vol. I, pp. 481-504; L. Walras, *Études d'économie politique appliquée* (1898), Vol. IV, "Crédit," pp. 305 ff.; P. Leroy-Beaulieu, *Traité théorique et pratique d'économie politique*, 2d ed., Vol. III (1896); H. D. McLeod, *The Theory of Credit*, 3 vols. (1894-97).

1. The prominence necessarily given to the time element in discussing the standard of deferred payments is, in reality, the very characteristic by which modern industry has come to be sharply distinguished from that of primitive conditions. When there was no division of labor, exchanging of goods and the creation of obligations were at the minimum; but the changes introduced by the modern complexity and interdependence of industrial processes, by the division of labor, and by the development of vast operations merely in supplying raw materials for commodities to be finished for the consumer a considerable time ahead — all these influences have brought it about that most large transactions of today necessarily involve a time element.

Moreover, as this tendency has become more pronounced, the function performed by capital has grown to be more and more important. Capital is used as a means of discounting the future; it bridges the operations, for example, beginning with the planting of wheat and ending in the distribution of bread to the consumer. As economic civilization has advanced, as the time element has appeared more generally in processes having as their aim greater productivity, so capital, as it has become more vitally necessary, has become more efficient. Without being led afield into a discussion of capital, which would be alien to this treatment of credit, it is clear how essential to the understanding of credit is a grasp of the fundamental services of capital to

society. So far as it is a means of bringing present goods to the service of producers whose efforts end in the future, the function of capital is self-evident.

With the division of labor, the marvelous inventions of machinery, the prolongation of industrial processes (so that a unit of product can be more cheaply sold in the end), the growth and prodigious increase of all forms of capital as a help to this movement have naturally led to the evolution by society of the practical means by which men of affairs, when preparing for the future, are enabled to obtain control of property and capital in productive efforts with the least waste of efficiency. As a part of this evolution, as a practical means to an end involving futurity, credit has come into existence. In its simplest terms, it is a transfer of commodities involving the return of an equivalent at a future time;[1] but subsequently it developed into something more than that—which it will be my purpose to explain later. Credit is machinery invented to aid in accomplishing the purposes of capital; if an essential function of capital is to discount the future, the essential characteristic of credit is the element in it of futurity. The connection is not far to seek.

To get credit, therefore, is to obtain a transfer to one's self of commodities under an obligation (variously expressed, according to different habits and circumstances) to return an equivalent amount at a fixed date in the future. A careful analysis of popular uses of the word "credit" brings us, in almost all cases, to this ultimate conception. When a man is said to have "good credit," however, we must not confound the reasons for granting credit with credit itself; if he has the means of convincing the lender that he is sure to be repaid, his "credit" is said, in popular usage, to be good. Here we are entering upon the reasons why credit is given, which lie beyond the statement of what credit is.

In defining credit as confidence in the future solvency of a borrower, Nasse criticises Knies for failing to distinguish between credit and credit transactions. But, if credit is regarded as the transfer of goods, there is no such distinction; credit appears

[1] E. NASSE (reviewing KNIES in *Jahrbücher für Nat. und Statistik*, N. F., I, pp. 83–105) points out that the most essential characteristic of credit is not the time intervening between loan and repayment, but the transfer of the right to use property which it effects (p. 85).

KNIES (*Der Credit*, I, p. 68) defines credit as an "exchange in which one party renders a service in the present, while the return made by the other falls in the future." E. NASSE criticised this definition, as emphasizing too much the element of futurity, and gave his own: "Credit is the confidence felt in the future solvency [*Zahlungsfähigkeit*] of a person, which enables him to obtain the property of others for use as a loan, or for consumption" (*op. cit.*, p. 84). JEVONS regarded credit as "nothing but the deferring of a payment" (*op. cit.*, p. 238). LEVASSEUR'S definition was: "The exchange of an actual reality against a future probability" (*cf. Question de l'or*, p. 244).

A. WAGNER'S definition seems unnecessarily verbose: "Credit is that private economic exchange, or that voluntary giving and receiving of economic goods between different persons, where the service rendered by the first is performed from his confidence in the assurance given by the second that he will render a recompense at a future time" (*Schönberg's Handbuch*, I, p. 380).

MCLEOD speaks of "a credit as the Present Right to a Future Payment" (*op. cit.*, I, pp. 88, 571).

"Credit," says P. LEROY-BEAULIEU (*Traité théorique et pratique d'économie politique*, 2d ed., III, p. 354), "is the exchange of an actual present good against an equivalent which one engages to furnish within a certain period."

CARLO F. FERRARIS (*Principii di Scienza Bancaria*, 1892, p. 5) regards credit as "the whole of those economic and moral conditions because of which men consent to make payments in the present on the promise of repayment in the future."

L. WALRAS regards "credit as the lending of capital" (*Études d'économie politique appliquée*, IV, p. 305).

J. CONRAD (*Grundriss*, §28, pp. 23, 24) and A. HELD (*Grundriss*, §12, p. 61) make credit a matter of confidence, etc.

E. VON PHILIPPOVICH (*Grundriss*, I, §99, p. 196) makes credit the relation between parties to an exchange "through which the one, by virtue of a service already performed (a transfer of goods, a payment, or work done), may demand from the other a return for the service."

only in a transaction. What is a man's "high credit"? It means that his reputation for repayment is high; that he easily gets a transfer of goods. If we were to accept Nasse's conception, credit might exist without ever being used; for we might have confidence in a borrower's power to repay which he never exercised. Then, an expansion of credit, in this sense, would lead us to the absurdity of saying that with an increase of confidence in borrowers there had been an increase in a country's credit. Of course, there would have been an increase in the possibility of using credit, but that is a different thing from saying that credit itself has been increased; while, from my point of view, an expansion of credit could take place only by transfers of goods to a greater amount. In any other sense, credit seems to be a metaphysical abstraction.

It is desirable, also, to distinguish between credit itself and the forms which arise out of credit transactions. Economic and legal conceptions should be carefully kept apart. The actual transfer of goods is the essential economic part of the credit operation; the promissory notes, drafts, bills of exchange, book entries, and the like are merely the evidences of the credit transactions which have been used to facilitate, in a greater or less degree, repayment, and they differ from each other largely in business convenience and legal force.[2] The readers of economic treatises, however, will find credit usually treated as if it could be covered by an account of the use of notes, checks, and various forms of credit. This, in my judgment, has led to some popular fallacies on credit and money which are difficult to eradicate. The forms of credit will be treated hereafter, when the monetary uses of credit are taken up.

Whenever the time element is eliminated from a transaction, it will be seen at once that credit does not enter into it. A transfer of goods for which an equivalent is rendered on the spot would never be thought of as a credit operation. In fact, buying and selling for an immediate consideration (or "cash") is generally understood to be the very opposite of credit. It has been claimed that confidence and not the time element is the primary element in credit.[3] It is the time element, however, which is essential; the matter of confidence, on the other hand, appears only because the repayment is relegated to the future. Exactly because futurity is the central thing in credit does confidence enter at all as a consequence. But confidence cannot be spoken

[2] To know the law governing bills and notes is a very different thing from knowing the economic principles underlying the operations out of which the legal forms have arisen.

[3] ADOLPH WAGNER ("Der Credit," in *Schönberg's Handbuch*, I, pp. 379–415) follows Knies in emphasizing the time element and regarding confidence as a necessary consequence of it; but Wagner gives the latter some proper importance (pp. 380–93). G. COHN (*Grundlegung*, pp. 551, 552) criticises the emphasis on the time element because it "emphasizes a merely secondary phenomenon which follows from the nature of capital as a durable good; for, since durability belongs to the concept of capital, the use of which is transferred, it is perfectly evident that every transfer of the right to use capital carries with it the idea that the capital is to be restored later."

M. BLOCK'S (*Le progrès de la science économique*, I, p. 481) position is: "We admit freely that confidence plays a large rôle in the matter of credit; without confidence many transactions could not be made; but in other cases it must be said that confidence is more or less, or even totally, absent. Peter comes to Paul, and asks for a loan of 100 francs. Paul has no confidence in Peter and refuses. Then Peter says: 'My watch is worth a good deal more than the 100 francs; you may have it as security; besides, I will pay the usual interest.' Paul, who expresses the value of his capital in money, lends the 100 francs; but confidence had nothing to do with the matter. It is the value of the security which determined his decision."

of as the pivotal thing in credit; although it is influential in deciding whether credit shall be given or not. The difference is wide: walking is one thing, the reasons why one walks (to one's office or to a funeral) are very different. Hence it is well not to assign much importance to the easy etymological derivation of credit from *credere* (meaning "to have confidence").

By general agreement, usage would never allow any obligation entered into for the future delivery of personal services to be spoken of as credit; and rightly. A contract to work ten hours a day for the coming three months should not be regarded as a credit obligation. We may, therefore, agree to confine credit operations to goods or property of a transferable kind. And, in the conception of credit, with the transfer goes the right to make any ordinary use of the goods; it carries with it the power, not merely to keep possession, but to destroy entirely (but always with the purpose of reproduction), if that is the best means of increasing product and getting back goods for repayment. Hence the lease of a house would not be a credit transaction. That is, we have in mind, generally, the transfer of quickly saleable goods, which need not always be returned in kind, but by an equivalent; not the same wheat, or wool, or gold which was borrowed, but the equivalent of them.

Many contracts appear as results of credit transactions. For instance, A borrows the means to finish the building of his house; he obtains certain goods which he inserts into his structure; and he gives a promissory note to B for its repayment, secured by a pledge of his property in the form known to the law as a mortgage. The note and the mortgage are merely the legal methods adopted to make repayment more certain; they are not essential in the credit itself. The real importance should be put on the transfer to A of means returnable to B in the future. Legal and customary forms intended to secure repayment have created different devices in the same community; while the prevailing habits of different countries have given rise to varying methods of obtaining the same result. In one situation, for instance, a book entry, in another a bill of exchange, in another a promissory note, are found most suitable. In short, the circumstances of the loan, the opinions and convenience of the parties to the contract, and the like, may bring into use a great variety of legal forms, all resulting from the primary transfer of goods. The undue insistence upon legal forms[4] arising out of credit draws attention away from the economic processes essential and intrinsic in it to the non-essential and external forms outside of it. The familiar case of a bank loan illustrates this truth: there is the essential element in the transfer of capital to the borrower on an obligation to return an equivalent value at a fixed time in the future; but the evidences of the transaction, whether in the form of a book entry as a deposit, or the passing of the bank's own notes, or the giving of a cashier's draft for the sum, are secondary matters, or consequences, arising out of the original credit operation. As said before, the latter merely form the machinery for

[4] Although McLeod has made many valuable and penetrating observations on credit, in my judgment his great error exists in the emphasis on legal forms in his prolonged discussion of rights and actions.

obtaining greater or less security with a view to repayment. Actual money, in such cases, will be found to serve only as an intermediary between different amounts of goods. The true relations of credit to money, however, will appear as our subject is developed.

2. Strip any credit operation whatever of its passing and superficial marks, and you will find in its essence that it is a transfer of goods involving futurity. So important is this general proposition that it needs all the elucidation which can be given within our limits; for the reader should be warned that this view is at variance with popular opinion, and even with that of eminent writers. Professor Nicholson, for instance, says that all credit rests on money.[5]

Here please recall the distinction between a standard in which the prices of goods are expressed, and a medium of exchange by which the goods are in fact transferred. Forms of property whose prices are expressed in terms of the standard may be actually exchanged without using the standard-commodity as a medium of exchange. Without anticipating the exposition of the practical aids furnished by modern banking expedients, it can be shown that credit is, in effect, a transaction in goods (expressed in terms of money); that it is granted only because the borrower can give good grounds for delivering the proceeds of (saleable) goods as means of repayment; and that goods form the basis of credit. Money plays only a secondary and minor part, auxiliary to the credit operations. Just as the amount of money is always and necessarily far less than the mass of saleable goods in the market, so the amount of money bears a low ratio to the sum of credit transactions which it helps on. The real object of such operations, as in all production and consumption, is the possession and use of goods which satisfy wants. When a man borrows, he gets the loan in the form of a right to draw a given sum of money; but actual money is of no use to him except so far as it aids him to get the coal, or cotton, or labor he needs in his business. The popular impression that a man borrows "money" is misleading; it is no more than the wrapper in which his goods come to him. As well say that a railway, which carries our wheat, produces wheat. The error resides in confusing the means with the end.

Whenever credit is granted, it will be found that a man has pledged some property he owns, or is believed to own (but to which he still holds the title in case he repays the loan), in return for the present use of means of payment in current funds. We are not now concerned with the particular form of the pledge, whether a single-name note, a note with an indorser, a note with collateral, a bill of exchange, or what not. It usually happens that the borrower has on hand goods, or securities, or saleable property, or the expectation of goods, which he cannot use, in their present form, as general purchasing power. If the manufacturer could turn the stock of harvesters and mowers in his warehouse into means of payment, he could buy more material, employ more labor, and have more machines ready for the next selling season; or, if

[5] *Monetary Problems*, chap. vi. The full discussion of the effect of credit on prices will be given later.

he has sold them to jobbers on time. and if he could get present means of payment for the sums due him in the future, he could enlarge his business. At this point the development of credit comes to his aid. On the basis of property, he gets a loan; credit enables him to utilize his resources without parting with their ownership (except as modified by the pledge); it enables him to change a command over his specific kind of goods into a command over goods in general. It is credit which enables men to coin property into means of payment. It is what Sir James Stewart so well described as "melting down of wealth into bank-money."

Naturally there arises some methodical arrangement for giving credit, by those who have property and capital to loan. Such institutions are usually called banks; although lending may be carried on by individuals. The sums to be loaned, although expressed in dollars, represent goods which lenders are willing to hand over to borrowers on obligations for repayment. Unused funds accumulate in bank deposits, and sums owned by persons unable or unwilling to employ them in production collect in institutions for investment. These goods appear on the deposit-accounts in terms of money; but none of the institutions has money enough to give out for each item of liability. Only specie enough is kept to meet the demands of those suspicious, or frightened, persons who may wish to turn goods into actual cash. Of course, if all wished to do so, none could do it, and general suspension would result. This makes it clear that the real object is to get from goods we have to goods we have not; that money is used only for facilitating this process. But credit is also a very clever device for getting from goods to goods without resorting to the actual transfer of the specie standard (or other money).

A typical loan transaction, containing the essentials of all, may be taken by way of illustration. A business firm sells cotton sheetings to jobbers on ninety days' time to the amount of $10,000. If confined to the actual capital owned by the members of the firm, their operations would be restricted; but if they can borrow of others additional capital, on the strength of the goods they have sold, they can coin the cotton sheetings held by jobbers into means of payment, and, by purchasing new materials, employ more labor, and increase their product. The sold goods are used as the basis of a loan at a bank. The bank buys the right to receive $10,000 ninety days from date; the firm gets the right to draw $10,000 (less discount) on demand. It should be kept clearly in mind that this credit operation, so far, was based on goods, and not on money. Now, whether the borrower will draw out his $10,000 in specie (or legal money) is a question quite independent of the credit operation; it is a question of the business habits of the community in which the firm exists, whether actual cash, or checks on deposit accounts, are in general use, whether it is a rural or a city district, or whether there is general commercial distrust and panic. These conditions do not have to do with the granting of the credit (except indirectly), but only with the proportions of reserves to liabilities. In most cities, the firm having $10,000 (less discount) to its credit would buy cotton, purchase machinery, and the like by

drawing checks on its deposit account, not using standard coin at all. That is, it has changed its control over sheetings—one form of goods—to cotton and machinery—other forms of goods more desired at that time. By coining the sheetings into general means of payment at the bank, the firm could direct their purchasing power thus obtained to any kind of article and in any fractional sums.

The service thus rendered to the community by an institution of credit is inestimable. The institution which thus coins saleable property into means of payment for the borrower does so only after deciding that the goods at the basis of the transaction are saleable; that is, that notes, or bills, in the leather trade, for instance, are safe paper to discount. In brief, the act of coining property into immediate means of payment is done on the responsibility of the lender; since if, by any mistake of judgment or honor, the goods behind the paper are not saleable, or if they are not capable of being reached because of error or fraud (or if the collateral, which, after all, is only a title to forms of property, depreciates, it is because of the subtraction of value in the goods on which they are based), the institution pays the scot, and stands the loser.[6] Hence, the process always has this corrective, this brake, that a mistake is followed by loss to the bank, or lender. The lender is, therefore, under a constant pressure of self-interest to see that the goods behind the paper are saleable, and that the proceeds of the sale will appear in amount sufficient to take up the obligation at maturity. The credit institutions, by thus acting, even under a heavy responsibility for inerrancy, enable the community to set into circulation—into the free exchange of goods against goods—a vast amount of property and commodities, which otherwise must remain an inert mass in the hands of owners. By credit operations they enlarge the industrial activity of the very persons most ready and able to act judiciously. If there were no credit, we should not see, as now, individuals and firms enabled to do a business enormously greater than would be possible with only the capital which they actually own. The encouragement of industry, and the enlargement of transactions, are the services rendered by banks and lenders to society. They belong to the class of things, like division of labor and progress of the arts, by which the world has been helped on in its economic growth. Credit is a creation of men in the natural evolution of obtaining the largest possible satisfactions consistent with human intelligence and the character of the globe on which we live.

Notes, bills, drafts, checks, book credits, or any form of obligation resulting from a credit transaction, come into existence, not antecedent to, but as a consequence of, a transfer of goods involving futurity. Paper is purely fictitious and illegitimate which is not the outcome of an operation in goods; and we are enabled to test whether loans are legitimate, or not, according as we know whether the discounts are granted, or not, for actual transfers of saleable goods. This test gives us the means of drawing

[6] As HADLEY (*Economics*, p. 245) says, the bank "may be said to insure credit. If it discounts a three-months' note and allows the maker to draw checks upon the sum with which it credits him, it protects the public, which accepts such checks, from the risk of subsequent insolvency on the part of the maker. It is because this insurance is effective that the public will accept checks where it will not accept promissory notes."

the line between sound and unsound banking. An increasing amount of notes and other credit instruments may be a direct and legitimate evidence of an increasing amount of transfers of goods; and by credit the transfer may be effected in any expanding quantity. The limit to the increase in legitimate credit operations is always expansible with the increase in the actual movement of goods. The fear of such expansion is groundless, so far as it is based upon goods.[7] Saleable goods transfer themselves with ease and dispatch through credit operations; no one, in fact, ever thinks of waiting until the forms of credit are sufficiently numerous to warrant the exchange of goods before buying and selling. Buying and selling take place first, at prices voluntarily agreed upon; and, secondly, forms of credit arise out of these transactions for an equivalent value, drawn in terms of the monetary denominator (although the latter may never be used at all in the exchange[8] operation).

Starting with credit as a transfer of goods involving an obligation to return an equivalent in the future, we find in practice that credit has in modern society developed into something more akin to money. Clearly enough, it does not act as a standard, or common denominator. Its relation to the subject of money is to be found in the fact that society has in credit created a medium of exchange. It is the natural result of the ever-present premium existing in business transactions to evolve a means of avoiding the risk and loss attending the actual transfer of the valuable standard; and it remains in use because transactions involving futurity are thereby rendered possible and legitimate to the immense advantage of commerce and industry. It is the evolution of a refined system of barter, rendered necessary by division of labor, the interdependence of industries, and the introduction of the time element. A clear understanding that credit is based on goods, that its service is that of a medium of exchange, is necessary to a just treatment of the difficult question of the effect of credit upon the prices of goods, to be discussed later.

The reason for the common belief that credit is based upon, and limited by, money, is evidently to be found in the fact that all the evidences of credit transactions (such as notes, bills, checks, book credits) are drawn in terms of money; and that every business-man assumes that his checks, or deposit account, or bills payable, can be liquidated in money. If this were not so, he reasons, what would be their value to him, in preparing to meet his own obligations? Paradoxical as it may seem, it is absolutely true that the mass of obligations could not possibly be, and were never really intended to be, liquidated in actual money. The fundamental truth is that the quantity (and value) of goods vastly over-passes the quantity (and value) of money; only a portion of the wealth of any community is, or ought to be, invested in its machinery of exchange. Provided that exchanges go on efficiently, the less the

[7] The idea that credit is expanded according to the will of the banker, and that it is capable of undue expansion, without relation to soundness of resources, reflects a confusion between legitimate and illegitimate credit. Excluding fraudulent banking and abnormal credit, the lender obtains full and sufficient value for every liability; his operations are based on saleable goods. *Cf.* NICHOLSON, *op. cit.* (p. 74): "There is no limit to the creation of credit substitutes for coin, except the will of bankers, traders, and merchants."

[8] Probably not one bill in 100,000 is ever paid in Money or Bank Notes."—MCLEOD, *op. cit.*, I, p. 317.

country's wealth invested in this unproductive form the better. To speak as if a country were better off the greater the amount invested in its money machinery is to glorify the fact of its backward commercial growth; or, as if a farmer could plow better with a plow decorated with costly precious stones, when one worth one one-thousandth as much would do the work perfectly. Just as all the population of a walled city do not wish to pass through its gates at once, whereby a few gates suffice at any one time; so, likewise, not all of the mass of goods are seeking exchange at the same moment, hence the amount of money needed for exchange is, of course, far less than the total amount of goods. This is an economic commonplace.

The reasons why actual cash is needed are not (except in small retail transactions) generally those which have to do with efficiency of exchanges. Men, in the ceaseless circuit of moving goods, getting desired satisfactions by giving one kind of surplus goods for others not possessed, do not care for money itself. Indeed, it is the last thing men really need; since exactly as long as money is held does the owner lose, because money itself is barren. It can, of itself, not give any satisfaction (as, *e. g.*, in Ladysmith during the siege). Therefore, every intelligent manager tries to keep as little money as possible; to the extent that he is obliged to hold it, it earns no interest. Hence the desire to invest it at once; that is, to exchange it for goods, or to set it going in production by buying a share in some productive enterprise.

The final and conclusive evidence that goods, not money, are the basis of industrial operation, is given when, in times of distrust and panic, when almost everyone, wishing to anticipate maturing obligations, tries to turn goods into actual money. Then it is seen that it cannot be done: an *impasse* ensues. And naturally; if there were no fright, no panic, men would not think of struggling for money. That effort arises, not in the normal processes of exchange, but from abnormal conditions of overtrading, misjudgment, and ill-adjusted production, when, at the same time, legal obligations[9] must be met (supposedly) in money. In brief, all transactions cannot be liquidated at once in actual money; and, if it were possible, that is not what would satisfy our daily wants. The best machinery of exchange is that which enables our own product to be most easily exchanged for the various goods which we desire; and money is but one of the means to the end. Credit is, also, an important instrument, or medium, of exchange. Certain reserves of money are necessary parts of the system, to provide against lack of confidence, general distrust, and unreasoning human nature. As McLeod says:[10] "Though in every system of credit there must be an ultimate reserve of specie, yet that ultimate reserve does not bear a constant, fixed ratio to the quantity of credit: but it mainly depends on the organization of credit: the more highly organized the system of credit is, the less is the requisite amount of the ultimate reserve of specie. . . . . Any amount of credit may be created and extinguished without any relation to the quantity of money."

[9] On this point, however, it will be found that legal payments themselves are made in the forms customary in the community, and not even then necessarily in lawful money.

[10] *Op. cit.*, II, pp. 734, 735.

3. Credit will here be treated only in so far as it performs a function of money, and in a way to give us a better understanding of the phenomena of prices. Hence the history of credit, the various legal distinctions, and a detailed examination of its many forms do not seem to be relevant to this inquiry. These have been thoroughly studied by Knies in his monumental work on *Credit.*

The functions performed by credit should issue clearly from the above discussion:

(1) Growing out of the evolutionary processes of industry, with the object to increase the product of the community, the control of other's capital, in order to discount the future, was a natural desire. Credit, therefore, was not an increase of capital, but a means by which capital could be given mobility, and hence greater efficiency; it acted like the horses of the cavalrymen: they gave the men no increase in actual numbers, but they allowed an increased activity and mobility which was equivalent to a greater force of men. Credit does not increase capital in any material sense. If, as McLeod says, legal rights of action (originating in a transfer of goods) are credit, and if these rights can be bought and sold, there is an increase of exchangeable things, or wealth. But, even then, it is as plain as a pikestaff that the actual means of satisfying men's wants have not been increased by merely dickering in the titles to such goods — any more than by increasing the number of names given to a man you increase his muscles, brain, or stature. By credit, capital itself is not increased, any more than a man's muscular power is increased when he is using a crowbar, although he is, by such a device, making a more efficient use of the muscle which he already possessed.

(2) The quality of enabling capital to become more efficient, which is possessed by credit (like the crowbar for the workman), is the thing which has led some to say that credit actually increases a country's capital. Clearly enough, transferring goods is not a creation of goods; and credit is a far different thing from production. But the increase in the efficiency of any agency of production bears fruit in a direct increase of product. In every community there is some floating capital awaiting the proper investment; new capital is constantly coming forward; some capital is turning from one branch of industry to another, from one district, or state, to another; some persons are retiring from business; others are minors, or women, incapable of directing the management of their capital — from such sources as these the supply of loanable funds coming forward to join the vast amount already engaged in industry creates a reservoir of capital which by credit institutions, or by private persons, is readily passed into the hands of those who find pressing use for additional means, either because of superior management, or of special demand for certain goods. Automatically, credit allows capital to go into those industries which are most prosperous, and withdraws it from those which can make less fit use of it.[11] Thus indirectly credit increases product by aiding in the facility of employing capital, a prime agent of production.

(3) By coining property into means of payment, as already described, credit increases enormously the flexibility and transferability of all kinds of saleable goods

[11] This was fully explained by BAGEHOT, *Lombard Street*, pp. 13 ff.

for industrial use. It changes control over future goods, or goods in a fixed form or place, into a control over present, or usable, goods. In this fashion credit performs the function, on a large and imposing scale, of a medium of exchange.[12]

(4) When a person is enabled, by aid of credit institutions, to coin an enlarged quantity of goods into means of present payment, his power of purchase (supposedly) in cash at any one moment is limited only by his cash and the amount of saleable and bankable goods he possesses. To be sure, these grants of credit carry invariably the necessity of repayment, and the means of repayment (as well as the obtaining of credit) depend on there being enough saleable goods forthcoming at maturity to meet the obligations. If goods are saleable, the change into forms of money is an easy and secondary matter. On the other hand, miscalculations, accidents, and unforeseen events may prevent repayment by stopping the outcome of goods, or by lowering their value through some check upon demand. The possibility of buying, however, on an enlarged scale by the use of credit, no matter what its perils, exists. It is a means of throwing a vast purchasing power into any one direction; and, as we shall soon see, it is capable of abnormal extension in general. The immediate effect of elation, hopefulness, and prosperity is certain to cause an extension of unsupported or false credit, and to aid in the irregular and extreme movements of market (not normal) prices. Hence the cycles of rising and falling prices are exaggerated by this possible use of credit.[13]

4. The various kinds and forms of credit arise from a transfer of goods, which all credit has in common, but they differ in many ways according to the agreement of the parties, the business habits and traditions of the community, and especially for reasons arising from different legal methods of enforcing repayment. In fact, the forms of credit transactions and their classification belong more to a legal[14] than to a monetary study, in which one may easily be led away from the fundamental questions involved.

The kinds of credit obligations differ from each other mainly as regards the methods of securing repayment. It is in such ways that the business public has gradually worked out processes of loan obligations which allow the lender to eliminate almost entirely the question of personal confidence in the borrower. Instead of a simple promissory note given by the borrower (and indorsed by a fellow-merchant), a note secured by the deposit of sufficient collateral (made up of saleable securities) is a method by which an estimate of the personal honesty or probity of the borrower is unnecessary. In such an operation the main task is to keep informed as to the prices of the collateral, and to see that the margin is always sufficient to cover the loan.

Notes discounted on occasion of an actual sale of wheat, wool, cotton, and the

[12] McLeod is quite right in saying that "the true function of credit is to bring into commerce the present values of Future Goods" (*op. cit.*, I, p. 88; *cf.* also p. 571).

[13] This conclusion may be considered in connection with A. Wagner's point (*op. cit.*, pp. 394-7) that credit tends to steady prices by allowing capital to flow from industries in which business is slack and prices low into those in which demand is brisk and prices high.

[14] McLeod's study, as before remarked, has gone to great extremes in this direction, much to its loss of usefulness for the study of monetary problems.

like, evidenced by certificates or bills of lading, afford a basis of normal and legitimate credit. Just to the extent that discounted notes are based only on personal judgment or favoritism, without a basis of goods, they are speculative and abnormal. Such business is, no doubt, carried on, but it is uncertain and questionable. Of course, in case of a borrower of means and high credit, a loan may be made not ostensibly based on goods, if no collateral is exacted; but, in reality, it will always be found that the lender believed that the borrower had property which, in the event of disaster, could be taken by due course of law as an equivalent for the loan. That is, "high credit" is only a way of describing the chance of falling back on some kind of wealth which lies in the possession of the borrower; this property is security, but it is not at once as easily realized upon as collateral. To protest a note, get judgment of a court, and execute by levying on the debtor's estate is a longer and more uncertain process than assuming possession of collateral already deposited; but, in either case, the difference is only one due to greater care as to repayment. Goods lie behind each form of credit, although they differ in the legal formalities to secure repayment.

Promissory notes of institutions are evidences of a transfer of goods. When a bank makes a loan and issues its own notes to the borrower, it receives an obligation, giving the right (properly secured by collateral, or otherwise) to receive a sum in the future, which becomes a valuable item in its resources; while the borrower gets the right to draw on demand in the form of the bank's own notes. Bank notes, based on the security of such commercial assets, are elastic, as well as a safe form of credit operations; because saleable goods, in the process of getting from producer to consumer, are the final recourse even behind all securities (since collateral is, after all, only a title to saleable property or goods).

Promissory demand notes of governments have an entirely different character. They are usually the issues of a borrower, and not of a lender; they are evidences of debt not generally based on any goods having a marketable character; and for the goods received at the time when the notes were issued no equivalent property is held as resources. Ordinarily, such property is obtained solely in order to be entirely consumed. The security for repayment is not of a kind on which any sums can be collected by the creditor, since the government cannot be proceeded against through the courts. Consequently, the repayment being dependent on the uncertainties of partisan politics, both the intention and the ability of the issuer to pay are clouded with doubt. The demand notes of a state may thus be changed into promises whose fulfilment has been removed into the indefinite future.

A borrower, or depositor at a bank, has a demand liability, which is the same in kind as, although different in form from, bank notes. The borrower, when granted a loan, is given the right to draw on demand; that is, he first becomes a depositor. This right to draw actual money is, in ordinary large transactions and in normal times, seldom exercised; because the cash may be lost or stolen, and because the right to draw is itself good means of payment, and is a convenient way of canceling indebt-

edness by a transfer of rights to draw in the form of checks, or drafts. The deposit account is, in the main, the evidence of transactions in goods, and checks are the forms by which claims on the deposits can be passed to others. For instance, the sale of cattle may be behind a $10,000 deposit; then by checks $5,000 may be transferred to others for lumber, and $5,000 for dry-goods. In essence, the credit transaction was the coinage of cattle into means of payment (represented in terms of the standard by $10,000) in a deposit account; then the value of the cattle was bartered for lumber and dry-goods. The exercise of credit is measured better by bank deposits than by bank notes among large institutions in city communities, even better than by the mass of checks and clearing-house totals (although the latter are approximately correct). As the whole of the deposit account may not be drawn upon, the bank deposits show more accurately the extent of the credit operation than the checks actually drawn.

Continental countries in Europe, by habit, employ the deposit and check system less than the Anglo-Saxons, but instead they make extended use of the bill of exchange. The seller draws on the buyer, and uses the bill as a means of payment to his creditor, one bill often liquidating a score of transactions. The goods which by a transfer originated the first use of the bill are thus used to offset the payment for other goods of equivalent values many times in succession. And, even when created by banks, bills are based on the transfer of the commodity, gold. The bill, when drawn for a date in the future, is thus only one form of accomplishing a credit operation. When finally presented, after its round, it is a charge against the drawee's account; but on its way it has offset many payments.

Simpler methods, without resorting to the use of a credit institution, are adopted when a buyer obtains goods on account, the book entry being the evidence of a transfer of goods, carrying with it an understanding that the buyer will pay an equivalent at some date in the future. Such entries may not be followed by the drawing of bills of exchange, or the signing of promissory notes, which could be discounted by the seller. Such forms of credit, therefore, while very numerous, are not of a kind to be passed from hand to hand, and their activity in exchanging other goods is *nil*. The security for repayment is in the loosest legal form; hence, it is one in which great risk resides. In this respect it is more troublesome (in case of commercial failure) than promissory notes.

While the above description gives the general characteristics of the commonest forms of credit,[15] it must be recalled that they vary in many details of law and custom, which lie outside of our present study. It may be well to add the distinction [16] between a credit operation in which (1) the property transferred to the borrower must be returned in the identical form loaned (*e. g.*, a horse), and (2) one which gives abso-

[15] PHILIPPOVICH (*op. cit.*, pp. 197, 198) distinguishes between the following kinds of credit transactions: (1) In respect of the *person* of the debtor, credit may be public or private. (2) In respect of the *duration* of the transaction, credit may be: (*a*) short or long credit; (*b*) terminable credit, and that whose limit is not expressly stated; and (*c*) credit terminable on demand. (3) In respect to the kind of *security*, credit may be real or personal. (4) In respect to the *use* made of the goods, credit may be production or consumption credit.

[16] *Cf.* MCLEOD, *op. cit.*, I, p. 147.

lute control over the thing loaned, permitting its entire destruction, and demanding only a return in kind (*e. g.*, a return of red wheat No. 2). Ordinarily, the courts enforce the return of an equivalent value.

Not infrequently[17] credit is classified as real or personal; with some mixed cases. In real credit the chance of repayment is founded on some thing given as security, having durability, value, or ease of conversion into money; while in personal credit faith is reposed in the word of the debtor. The mixed cases cover some instances of ordinary discount, which are based partly on the personal character of the borrower and partly on the legal claim against property given by his note. As explained above, in my judgment personal credit is not a legitimate business transaction;[18] only that which insures repayment of goods, by a more or less strictly drawn security, is to be regarded as legitimate. In the future, doubtless, personal credit will properly become a smaller and smaller part of the business of solid and large institutions.

5. Such being the nature, basis, functions, and forms of credit, as already developed, it is for us to consider next the important classification of credit transactions, in regard to their effects and use, into normal[19] and abnormal credit. Normal credit is the coinage of goods, or property, into present means of payment (in terms of the standard, *e. g.*, dollars of gold) in amount no greater than the value of the marketable goods, or property, owned by the borrower. That is, a person can get normal credit only by showing that he has the marketable wealth, or a reasonable certainty of wealth in the future, which will fully secure the lender for the loan. By transferring to the lender the claim to his cattle or grain sold, the borrower gets in return present means of payment in the form of a deposit account at a bank; and so long as the claims held by the bank are based upon actual and saleable property, the transaction is sound and normal. At time of maturity the note is paid, and the funds of the institution are freed for other operations of the same kind. The means of payment granted to the borrower are used by him to pay for other goods, or services in production. In short, the process, at the bottom, is an exchange of goods against goods, facilitated by the exceedingly efficient use of forms of credit and credit institutions. Without the aid of credit, each person (or firm) must go on producing with only the present goods which he owned, while much of his property would remain to him inert, and incapable of being used as purchasing power. Under the modern division of labor each producer

[17] *Cf.* P. LEROY-BEAULIEU, *op. cit.*, III, pp. 356, 357.

[18] When discussing the justification of a loan in the productiveness of the industry for which it is used, HADLEY (*Economics*, p. 143) raises this point when he says the creditor should "look to the investment rather than to the borrower for his security."

[19] Several years after using this classification in my lectures, I found this admirable statement of P. LEROY-BEAULIEU (*op. cit.*, III, p. 358): "Credit ought not to be a simple anticipatory claim on wealth still in the future and uncertain; it should be based upon a real and actual thing—wares produced and not yet sold, wares sold and not yet paid for, even wares still in course of production, if all the materials have been obtained, an enterprise not yet finished, but which has already been carried to a certain point of advancement. . . . . Such is normal credit; its function is not that of commencing enterprises, but of intervening at a certain stage of their development to facilitate completion, and especially renewal."

McLeod hints not remotely at normal credit in saying: "Credit always has to be redeemed; and if this can be done, the Credit has been sound. Hence Credit is never excessive, whatever its absolute amount may be, as long as it always returns into itself" (*op. cit.*, I, p. 318).

needs the results of others for present operations until his goods are finished. If all credit were abolished, it would affect all operations now requiring some aid in present goods for which future repayment would be possible.

Normal credit thus enlarges the purchasing power of a man to the extent of all his bankable property; or, in other words, it sets into the circulatory movement of exchange of goods against goods more forms of property than could otherwise be set in motion. Suppose, by way of illustration, A today sold $10,000 of cattle on sixty days' time, and has also in hand $2,000 in cash; what is his present purchasing power? Evidently, by discounting his bill or note, it is in all (less the discount) $12,000. If he could not have had credit, it would have been only $2,000. The same would be true of B, who had sold flour; of C, who had sold steel; and so on through the whole industrial community. If no credit were possible, in each case the purchasing power would have been limited to the cash in hand; on the other hand, by a general resort to credit, each and all would have purchasing power to the extent of their bankable property.

The question of importance now raised is: What is the effect of this enlarged purchasing power on prices? Or, what is the influence of normal credit on prices? A's cattle have been coined into means of payment expressed in dollars; and, if it is directed to the purchase of B's flour (which has also provided means of payment to B, expressed in terms of the standard money), there is a demand for B's flour exactly counterbalancing the demand of B for A's cattle (supposing B to have that demand). Enlarge the operations to include C, D, and all others; then the transactions will balance all around; and the phenomena become simply an exchange against each other, of a greater number than before of goods at relative values dependent on the reciprocal demand and supply for each commodity. A general increase of purchasing power, arising from normal credit, acts upon prices in no other way than would an increased production of all goods. It is the case where general supply is identical with general demand;[20] an increase of supply is, *ipso facto*, an increase of demand. If an increased amount of goods come forward to be exchanged, we may have the phenomena of changes in relative values, and so in relative prices (accordingly as some goods are unequally affected by relative demand as compared with others); but it does not at all follow thereby that there will be any change in the value of the general mass of goods relatively to gold, that is, a change in the general level of prices (unless there comes

[20] "Let us suppose a *régime* of barter: under such circumstances Supply would consist in the commodities offered in exchange for other commodities. In what would Demand in such a case consist? We can only give the same reply: in the commodities offered in exchange for other commodities. In other words, under the simplest and most elementary form of exchange, Demand and Supply, as general phenomena, as aggregates, could not be discriminated. Each commodity would be in turn Supply and Demand — Supply in reference to the person seeking to obtain it, Demand in reference to the person who used it as the means of obtaining something else" (p. 24).

"A certain number of people, A, B, C, D, E, F, etc., are engaged in industrial occupations — A produces for B, C, D, E, F; B for A, C, D, E, F; C for A, B, D, E, F, and so on. . . . . The producers are also consumers; and if, on the whole, less is produced, there would, on the whole, be fewer commodities to be exchanged. But why should this affect the proportions in which they are exchanged? or why should it affect the relations between commodities in general and money?" (p. 32). — Cairnes, *Leading Principles of Political Economy*, chap. ii.

in with the supposed increase some improvement in the arts which would lower the price of each unit of product). And the same would be true, also, of an increased activity of exchanges brought about by normal credit. Let m represent all the goods capable of being exchanged only by means of money, and let x represent goods exchangeable by credit. Then the total mass of $m + x$ would be exchanged against each other with practically the same results, so far as general prices go, as m alone would have been. The end would be the same. Credit has been the evolution of a refined system of barter, enabling goods to be exchanged against goods. When looked at generally, all bankable goods form the supply, and at the same time the demand. In the last thirty years, in fact, we have seen an enormous enlargement of the output of goods, and with it has come a corresponding expansion of bank deposits, but yet the prices of each unit (ton, bushel, etc.) of goods are, in general, less today than at the beginning of this period.

But, looking at each transaction separately, a temporary aberration in market prices may be seen. The appearance of the new demand is not simultaneous in all industries; in those in which it appears first there is a new purchasing power relatively to goods in other industries. If, for example, A's $12,000 is all offered for B's flour, a rise in the market price of flour may result, without in any way changing the normal expenses of production of flour; later, competition among millers may appear, and the market price will fall. Likewise, if C disclosed a new demand for A's cattle, the market price of cattle, as well as that of flour, may rise; but cattle would, in time, be affected by competition, and the price of each animal of the larger total in existence would tend to fall toward the normal price. Thus by credit operations—which have the same general effect as an increased product—there may be perturbations of temporary, or market, prices; but normal prices will be resumed, if any competition exists, under the working of demand and supply. It must be admitted, theoretically, that, as normal credit may produce temporary fluctuations of prices, it may produce possible changes in the value of the standard; but these changes will be so slight, running over so short a time, and so numerous, that they will largely offset each other and produce no appreciable results on the level of prices.

But the increase of purchasing power caused by normal credit leads many to believe it would raise general prices, just as an increase of money is supposed to increase prices. In this instance, some confusion may be avoided by pointing out that, although the titles to the property exchanged by means of credit are expressed in dollars, the credit operation is not—and, in the nature of things, cannot be—the same as an offer of actual cash. Many wrongly suppose that the additional purchasing power created by credit (and expressed in terms of money) is an actual offer of money. A purchase of flour by a check for $12,000 seems, on its face, to be paying with a claim on $12,000 of cash, to be got on demand at some bank. But a bank with $40,000,000 of demand liabilities, and having the highest standing, may not have more than $10,000,000 of cash in its vaults. That is, if everyone having a credit obligation

on demand were to ask for specie, instead of going on normally to get from goods to goods desired as economic satisfactions, no one could succeed; and there would result a stoppage of credit transactions and suspension. As before remarked, there never could, or should, be kept on hand an amount of the common denominator equal to the sum of all credit transactions at any one time; nor, if understood, is there any such intention in the minds of the business community.[21] Credit transactions are, in fact, except to a very limited amount, not liquidated by actual money. Hence, it does not follow that normal credit, by acting as an offer of an equivalent amount of standard money, changes the value of the standard (and thus changes prices) by an alteration in the demand of the community for gold. Some additional demand may arise with increased liabilities for increasing reserves; but of that later.

It may be said, however, by men of affairs: "If A is not granted discounts on the wheat which he is buying in Kansas, he must stop buying and shipping wheat; and, consequently, the price of wheat will decline." This is intended to show that credit directly affects prices, as much as the offer of actual money. This case, however, is one of a change in special demand and supply; it means only that, if discounts on a single article like wheat are refused, less property of other kinds (expressed in terms of money) is being (through banks) offered for wheat; it means only that wheat is changing in price relatively to other goods (not that prices in general are falling). Such a change in the price of a special article could be brought about by a readjustment of demand, even if credit or money did not form any part of the means by which demand expresses itself.

Normal credit cannot raise general prices. Goods, exchanging against each other with the tags of prices attached to them, do not act differently from those without such tags. In the case of the appearance of new goods, furnishing a new demand for other goods (all being expressed in terms of money), it may appear at first as if the other goods must rise in price under increasing demand. That depends on the adjustability of supply. Price is as much influenced through the supply as through the demand. In a case of particular supply and demand, such as this, a new and legitimate demand will increase the prices of other goods, and keep them on a higher level, only under the supposition that the increased supply is not immediately forthcoming.[22] But in many manufacturing industries the facilities for increasing the supply, as soon as a possible demand is perceived, are such as to bring about an

21 McLeod (*op. cit.*, I, p. 316) says: "Because a Bill, or Note, is an obligation to pay money, many uninformed writers suppose that they must always be paid in money or Bank Notes;" and he goes on to show that credit bears no fixed relation to the money in a country. To repeat, the real end and purpose of production and exchange is not to get the common denominator, but to secure those goods which give us economic satisfaction. Hence only that amount of the standard is kept on hand (that is, only that part of a country's wealth is invested in the machinery of exchange and money) which will meet the special demand for the actual standard from time to time. How much this will be will depend on experience, settled conditions, intelligence of business-men, character of the community, and the conditions of trade. If there is no fright or panic, little will be needed. The demand for actual money in a crisis is a special case for later discussion.

22 This was perceived as long ago as Arthur Young:

"I admit that, to an unknown degree, an increase of wealth, increasing the demand for certain manufactures, will increase the quantity brought to market, and prices stand as they were. For instance, send a gradual increase of orders to the manufacturers of *Manchester*, *Norwich*, *Birmingham*, etc., and they will answer the increased

instant response: more men are engaged, more material is worked up, and needed adjustments of space and new machinery are made in an incredibly short time. In fact, potential supply is sufficient in many cases to keep down the price, even under an increasing demand. More than this, under a demand for an increased supply, it is quite likely that the expenses for producing each unit of goods may be lowered. That is, an increased demand, attributable to normal credit, would not in many instances cause a rise of prices in other goods. In short, such an effect of normal credit, shown in higher prices, could be maintained only, in the special industries in which the supply is controlled, by some sort of monopoly conditions. Possibly the price of steel rails, to illustrate, might for a few years be kept above normal prices, because competition on a considerable scale, and a sufficiently large capacity in the mills to meet an exceptionally well-sustained demand, might not be in existence. The general proposition, then, remains clear: in some industries, a demand arising only from the presence of an increased quantity of exchangeable goods will not raise general prices; in some it may raise prices for a time, until supply can overtake demand; but it cannot spread to all industries, nor cause a general rise of all prices.

The pith of the answer to an inquiry as to the effect of normal credit on prices is to be found in a reference to the effect of credit on normal expenses of production. Does credit change any of the elements entering into the normal expenses of production of any article? If it does not, how can it be said to have any distinct effect on general prices? Goods already produced cannot be influenced as to their expenses of production by new means of exchanging them; if it affects price at all in that way, it would be by reducing price through greater efficiency of exchange. If it does not affect the commodity side of the price ratio, does it touch the money side? Are normal prices of goods affected by credit through operations which raise, or lower, the value of gold? It can affect the value of gold only by touching the demand for it; but in so far as normal credit can be said to change the demand for gold, it works to lessen the demand by furnishing another means of exchanging goods without having resort to the article chosen as the common denominator, or standard.

Theoretically, the gradual introduction of credit as a medium of exchange, until its amount has become very large, has enabled a work of exchange to be done which otherwise must have fallen upon some other form of money. It is not uncommon to reason that if this work were to fall, for instance, on gold, it would enormously increase the demand for gold, and so raise its value; *e converso*, it is argued, the existence of credit has taken away a large demand from gold, lowered its value, and, as a consequence, raised the general price level. This reasoning is sound in the main, but not altogether appropriate; no contention can be based on a contrast between the presence and absence of credit. It is as much a part of the gradual evolution of modern industry as division of labor; without either, existing operations would be

demand for perhaps a long time, without an increase of prices; because the people will increase with their industry, and a want of hands will not be felt." — ARTHUR YOUNG, *Political Arithmetic* (1774), pp. 118, 119.

impossible. Today the demand for gold is a fact based upon the existing customs and methods of society; and one of them has long been the use of credit. To reason on what would happen if it were absent would be like reasoning on a change in human nature, or on a supposition that the race has gone back in its industrial development to a point where primitive conditions only could prevail. This going back to an impossible point gives us no πού στῶ on which to reason.

To see all that there is in the question raised, we need only admit at once that anything which lessens the demand for the standard, or gold, will *pro tanto* lower its value, and thus indirectly raise prices; since a lowering of the value of the standard is equivalent to a rise in the goods side of the price ratio, or a rise of prices in general. If the gradual introduction of credit, therefore, has lowered the value of gold, it has affected prices only through a change in the value of the standard in its relation to goods, and not through an increase in the quantity of the media of exchange relatively to the money work to be done. At the best, it could be said that credit, by its enlarged use, has saved gold from being more and more needed as a medium to be passed from hand to hand in the actual exchange of goods; but there is no reason to suppose that human intelligence would not have devised something else to serve its purpose if it had not utilized credit.

Supposing that normal credit has saved gold from bearing a burden of demand which would otherwise have fallen upon it, the more correct way of stating the outcome would be thus: it has obviated a rise in the value of gold which would otherwise have resulted from the expansion of modern exchanges. But even this statement may, by itself, give a wrong impression. Gold has been generally adopted as a standard because its supply has become so great that changes in monetary demand or supply produce very slight effects upon its world-value in any short period of years. The great production of gold has outstripped the demand, or at least kept pace with the newly created demands arising from its adoption as a standard in countries formerly using silver; and the contemporary growth of credit has had the effect of making this supply go farther than otherwise it would. What would have happened without it, it would be absurd to speculate. Men being what they are, they will always scheme and devise methods of saving the use, as an actual medium of exchange, of a valuable standard which must run risks of loss when passed from hand to hand.

In a very practical sense, then, in the periods within which the enormous supply of gold prevents perceptible changes in the world-value of gold arising from changes in demand, it may be accepted that normal credit does not, in its fullest exercise, directly increase the normal prices of goods nor raise the general price level. It can do this only through affecting the world-value of gold, and thus reaching prices; but, on the other hand, there is no logical and substantial reason for supposing that normal credit has an influence on general prices through increasing the demand for goods by a so-called increase in purchasing power, or by the increase of the medium of exchange; since, in normal credit, be it remembered, a general increase of demand *ipso tanto*

carries with it an increase of general supply. In brief, although fluctuations in market price may be produced by irregular appearances of normal credit in some (and not all) industries, normal credit can have no general effect on values and prices, after a time long enough to permit temporary fluctuations of price to spend their force.

6. The effects of credit on prices are not confined to the workings of normal credit. Different results follow from abnormal credit, which may be defined as the coinage of goods, or property, into present means of payment (expressed in dollars or other units) in an amount *greater* than the value of the marketable goods, or property, actually owned by the borrower, either unknowingly or knowingly. At once it will be asked how an operation not based on evident requirements can ever take place. This question becomes still more importunate when it is recalled that the lender, who coins property into present means of payment, does so at his own risk, knowing full well, if he is mistaken as to the value of the collateral, or as to the saleability of the goods behind the paper, that he himself must meet the loss. If such be the facts, how does it happen that banks, or any lenders, could ever be led to create abnormal credit? Of course, the answer is that it never could exist, if the whole truth as to the present and future value of goods were always known, or if all men were perfectly reliable. Indeed, abnormal credit may arise either unintentionally or intentionally. In the first place, with the best of purposes, sanguine human nature may often see the possibility of wealth so vividly as to act as if it really existed; a man may believe that his purchasing power is greater than it actually is, and he may be able to convince a lender that he is right. More than this, the wisest of men may be mistaken in making business judgments; they may meet with unexpected reverses and accidents; or by changes in demand over which they had no control goods which once had a good market may become unsaleable. On the other hand, by conscious deception, paper which was supposed to be supported by satisfactory goods may become worthless by fraud. Thus knowingly or unknowingly — more often the latter — credit may have been granted which, in fact, was not based on saleable goods worth enough to meet the loan at maturity. Abnormal credit, then, is built upon error, delusion, or fraud; and sooner or later its falsity is sure to be discovered. Abnormal credit is speculative; and illegitimate speculation *e converso* may be defined as the use of abnormal credit.

What is the effect of abnormal credit on prices? How does it differ, as regards its influence on prices, from normal credit? On the face of things, abnormal is not distinguishable from normal credit; the loan has been granted on the supposition that good and sufficient property is behind it, even though there may be — either on the part of the borrower or lender — a deception somewhere. The business may seem to be sound when in fact it is rotten; or an unperceived shift of demand may be going on which will wipe out the value of the goods intended to meet the loan at maturity. More often, the optimistic temperament of men, or the spirit of adventure, may lead them to go beyond their means and over-trade. Men who have received loans may not make such

use of what they receive that they are able to repay when forced to take up their paper. This is a commonplace of business experience, which is constantly going on; in fact, credit men and banks are daily trying to distinguish between normal and abnormal credit, the one being sound, the other unsound; and yet externally they act alike.

The offer of credit, moreover, of any kind — whether normal or abnormal — appears in terms of money, and on its face is, in either form, purchasing power. In both cases, the machinery set in motion is the same, and the immediate effect of any special demand upon prices is the same; the difference will appear in the final effects upon the general level of prices. Normal credit extends a person's possible purchasing power to the full amount of his bankable goods, but abnormal credit goes farther than this: it gives the borrower a purchasing power often — when the delusion is widespread — enormously beyond the borrower's actual means. In the former case, changes in special demand offset each other, or are met by corresponding supplies, and do not affect perceptibly the prices in many industries except for short periods; in the latter case, what appears at first as only special demand is, by virtue of its general character, capable of extension over all goods, and ends by modifying the general level of prices. It is not because credit is "excessive" that it produces any danger; it depends upon the kind of credit, be it great or small, whether or not it is full of peril. Normal credit may increase indefinitely; but it can never increase dangerously. Abnormal credit, on the contrary, is perilous in any quantity, exactly because it is of a wholly different kind.

If abnormal credit gives — as it must — purchasing power, expressed nominally in terms of gold, it has the initial effect of all demand when directed toward special goods, and raises prices. This would be true whether the evidence of the credit transaction emerged in the form of a book entry, or in any other way. The price of other goods tends to rise under the new demand; the particular supply of other goods at once responds in many industries, certainly in those in which no monopoly conditions exist. Even though the new demand in this case is false, the supply comes forward as if, eventually, the goods behind the false demand, or their equivalent, could be had in payment. The supply is contracted for out of all proportion to a true demand; until the true state of affairs is disclosed, the real maladjustment of supply to demand is unperceived. When the actual goods (or their value) which are supposed to create the demand are exacted in any case, and the falsity of the situation is uncovered, then supply is found to be far in excess of the demand. When the delusion is pricked by any untoward event, the supposed demand collapses; and the prices at which the supply is held fall suddenly and heavily.

The peculiarity in the operations of abnormal credit is that this over-trading can go on in all industries, with the spread of a generally sanguine attitude; the false demand appears everywhere; or, in other words, the potentially false demand is everywhere present. The fictitious purchasing power, as already said, seems to be an offer of money. In reality, it is not an offer of money; indeed, it is not even an offer of sale-

able goods. Yet so long as the bubble was not pricked, all seemed fair on the outside. Prices went up all round. It was not merely a change in relative values due to a readjustment of special demand, as in the case of normal credit; it was a general, although speculative, rise of almost all prices.

From the point of view of general demand and general supply, the enlarged demand due to abnormal credit combines both the real and a false demand; and general supply is increased to meet the combined demand. Normally, general supply of goods ought to be identical with the general demand, taken as a whole; and while the delusion lasts this appears to be true. The goods offered serve as a total demand at prices offered for the supply; and the goods forming the supply serve as a total supply at the prices exacted. Then comes the pricking of the bubble. The false demand disappears. The value of the general supply is now vastly greater than the value of the shrunken general demand; and the high general level of prices, kept up by a false demand, now unsupported, falls. The outcome is that in many industries a vast mass of goods exists in supply out of all proportion to a legitimate demand based upon saleable goods. Then liquidation is forced at great sacrifices. Obligations have been entered into for sums of money based upon the high level of prices; while goods, by which liquidation must always be ultimately effected, have fallen in price, and the proceeds from their sale do not cover the amount of the obligations. As contrasted with normal credit, abnormal credit can cause practically a general rise in the level of prices, or at least a rise in the average of prices, and this high level can be maintained so long as general over-trading can go on without being discovered; after the discovery comes, the fall of prices can go even below the normal level, because of the wild rush to sell goods for liquidation. That is, in the false adjustment of demand and supply of goods, a general rise or fall of prices has resulted from influences affecting goods in general, but which have not originated with the standard in which all prices are expressed.

It should be observed that what was once normal credit may, by force of events out of the control of borrower or lender, gradually or even suddenly be changed into abnormal credit. At the time of granting credit, the security exacted for repayment may be ample; but, before the loan matures, it is conceivable that the value of the securities, by changes in the industrial situation, may shrink so much as to leave the lender little or no protection. For instance, securities are valued largely according to the certainty and amount of dividends, or interest, paid on them; and a commercial reverse would cut off earnings, lower dividends, cause a serious fall in the capitalized value of the securities, and leave the loans for which they had been a protection uncovered. That is, a normal credit becomes by such events partly abnormal credit. In such cases, it might possibly be supposed that the disturbance and loss would fall upon the lender, or bank, that had already granted the normal credit; that in this way the demand originally created would be unaffected; and that the influence on keeping up prices would remain in force. Far from it. The lender has various means of trans-

ferring the responsibility to the borrower: in cases of demand loans, they can be called in at once, if the collateral proves insufficient; if the loan is a time loan supported by securities, additional protection can be called upon, if shrinkage occurs. In such ways, the borrower in general will be obliged to carry the burden of his own creation; he must meet the difficulty by turning other goods, or property, into means of payment, or else stop payment altogether. This will limit his demand, and force him to contract his offers of purchasing power. Had a bank been taking paper without much intelligent discrimination, and, when it tried to force responsibility home on its borrowers, happened to find them quite generally unable to respond to its demands, then the bank itself would be obliged to suspend; it would be punished for its bad judgment; but the fictitious purchasing power which it had fostered would be eliminated, and, the false demand being withdrawn, prices in general would fall.

Although the general rise of market prices caused by abnormal credit is speculative and based on a delusion, yet it is a fact; and the rise of price, continuing so long as the over-trading exists, does for a time produce a new valuation of goods relatively to the money standard. The rise of prices is only a statement of the fall in the value of the common denominator (or gold); but it is plain that we have here a change in the price-relation between goods and gold due not at all to operations directly affecting the demand or supply of gold, that is, not affecting the gold side of the price ratio.[23] It is a general change of prices not attributable to the abundance or scarcity of the money material (*e. g.*, gold) used as a standard. And, if a remedy were to be sought to prevent such movements of price, it would be absurd to begin with the money side of the ratio. Changes of price arising from illegitimate speculation must, of course, be dealt with wholly by influences regulating, or restrictive of, abnormal credit and over-trading. This, however, is a study of human nature working in the world of trade and commerce under great tension, which is not within our present purpose.

Whenever, under normal credit, there occurs a mistaken adjustment of production to effective demand, as when goods are not wanted in the proportions produced, the outcome will be much the same as under abnormal credit. The demand is based on a delusion, or is non-existent; so that an offer of purchasing power based on goods not in demand becomes powerless. If, on the surface, goods seem to be behind the transaction, it is found out later that the reality was not as the seeming; since the goods did not have the saleability supposed. Hence the collapse of the purchasing power, and the consequent drop in prices of the goods toward which the demand had been directed.

7. The operations of abnormal credit[24] provide the materials for a commercial crisis. If many traders become optimistic, and all are over-trading, prices and securi-

[23] McLeod's statements about gold and credit do not seem true; "This Credit produces exactly the same effects: and affects Prices exactly as so much Gold. Prices are estimated by the aggregate of Money and Credit" (I, p. 335). "All Credits payable in Gold — whether Bank Notes, Banking Credits, Bills of Exchange, or any others — have identically the same effects on the Value of Gold and on Prices as an equal quantity of gold itself" (II, p. 733).

[24] When McLEOD (*op. cit.*, I, p. 335) says, 'It is through the excessive creation of this species of Property that all Commercial Crises are brought about; and through the mismanagement of these, and bad Banking legislation, that Commercial Crises develope into Monetary Panics," he seems to exactly describe abnormal credit.

ties rise, until, at the psychological hour, the circuit is broken at its weakest link. Some event, of relatively small importance, brings down one person or institution; and, when liquidation is attempted, it is found that promises have been made quite beyond the amount of resources, that credit obligations existed greater than the goods actually owned—that is, that the liabilities far exceed the resources. Then others find that paper due them is not collectible, that is, is not based on saleable property to a sufficient amount; more persons fail, and finally a general collapse comes. In proportion to the extent of the over-trading is the crisis more severe and ruinous. The effect is exaggerated by a rush to convert all forms of goods and property into the actual legal standard, because maturing obligations must be met (supposedly) by actual cash.[25] Of course, as said before, all goods cannot be converted into cash at the same time (any more, to use an old illustration, than all the people of a country could ride on the railways at the same hour); but the panic-stricken dealer throws over goods and securities, and forces prices down to an extreme point by selling when no one is anxious to buy. It is in such circumstances as these, we shall find, that means of payment are created, based again on goods such as clearing-house certificates; or, as in England, by obtaining new reserves of notes based on consols by a suspension of the Bank Act. In short, a panic demonstrates that credit transactions are really based on goods; that liquidation never can be forced in money; and that the invariable remedy is some method of tiding over the emergency by creating means of payment based on goods (not specie) which will be acceptable by lenders from borrowers[26] (*e. g.*, clearing-house certificates).

The fall of prices due to a commercial crisis, and the so-called subtraction of credit, is, then, due to a return from abnormal to normal credit; it is not an annihilation of credit, but a forsaking of credit not resting upon actual saleable goods.

8. The full discussion of the theory of prices is, of course, necessary to a final conclusion as to the effect of credit on prices; but the present analysis of credit operations allows the influence of credit, to some extent at least, to be seen by itself.

The problem may be clearly presented by the accompanying diagram. Sections (1) and (2) together represent all the wealth of the community; while (3) arises from dealings in, or exchanges of, articles in (1) and (2). Section (3) is no part of the total wealth of the public;[27] it is only a set of devices created in the later evolution of industrial customs by which (1) and (2) can be efficiently set in motion and exchanged.

(1)	(2)	(3)
General Wealth in Goods	Gold and Silver	Forms of Credit

[25] On this point, however, see note 9, p. 11.

[26] In speaking of the after-effects of a panic, NICHOLSON (*op. cit.*, p. 73) describes what is really the return to normal credit: "As soon, however, as the contraction of credit sets in, the bankers make wry faces over credit-documents not of the first class, and there is a sudden diminution in the representative money and a great fall of prices." The fall of prices, however, is certainly not in this case due to a reduction in the quantity of the media of exchange other than abnormal credit.

[27] This, of course, is at variance with McLeod, who makes rights to receive wealth a part of wealth. This is

It is evident that (2) plus a part of (1) together form the total possible purchasing power of the country, going and coming interchangeably. The reason that not all of (1) can be included in general purchasing power is that some goods, like fixed capital, land, and the like, may not be saleable, and therefore not bankable property. But (3) is the machinery by which a very large part of (1) is converted into general purchasing power, in addition to (2). That is, the explanation shows how credit has, in general, increased the purchasing power of the community, in the sense that a part of (1) can be used as means of payment, instead of the country being restricted only to (2). It is true that all of (3) is drawn in terms of (2), or the standard, but (3) does not increase the amount of economic satisfactions *per se.*

The difficult question as to prices is the effect of (2), or money, on prices; and, also, we must discuss the influence attributed to (3) on the prices of articles in (1); or, put in another way, what is the effect produced on the value of (1), goods, relatively to (2), or money, by the existence of (3), or credit? As yet, no discussion has been given of the general theory of prices, or the values of goods (1) relatively to money (2). The present study is concerned with the effects of (3) on the prices of (1), so far as they could be touched upon without anticipating the general theory of prices.

It has been found that modern credit is a means of coining property into means of payment, thereby enabling that property to be exchanged against other property without the intervention of money as a medium of exchange (except a part held as reserves for unexpected emergencies). While serving as a medium of exchange, credit in no way dispenses with money as a standard, or common denominator. In fact, the process of evaluation of goods in the standard metal, or price-making, must necessarily be antecedent to the credit operation, which follows the agreement on price. But the phenomenal development of credit only emphasizes the truth that the stability of the standard (in which prices are expressed) is beyond all things most essential; since all the mass of complex transactions, cross-exchanges, contracts, and credits, are drawn in terms of that standard; and a change introduced in the value of the standard (by causes affecting itself only) runs through all the engagements of the whole business world, and becomes destructive to the property relations of every citizen of the state.

It has been seen that purchasing power in the form of credit cannot affect the price ratio by any influence on gold itself, except through an alteration in the demand for gold. Instead of increasing the demand for gold, the general development of credit lessens the demand for gold; hence, instead of making gold dearer, it works in the end to make gold less valuable (or at least prevents it from becoming more valuable by doing work for it). An increasing mass of credit transactions does not carry with it anything like a proportional increase in demand for gold, unless we suppose

due to different conceptions as to the fundamentals of economics, and as to what wealth means. As a legal right does not itself yield an economic satisfaction, and since the exchange of the right is really the exchange of goods covered by the right, a single piece of goods behind a credit transaction should not be counted twice, once in (1) and again in (2), as a part of the total wealth.

that it calls for an increased use of standard money to be employed as a medium of exchange. Such a supposition is contrary to the history of the race; it assumes that with increasing transactions the permanent business habits of the people as to exchanging goods will revert to those of primitive days. How far increasing credit transactions demand greater reserves, and thus increase the demand for gold, cannot be taken up here; but the effect of an expanding use of credit in demanding more specie reserves has had a very slight effect upon the world-value of gold and, through it, upon prices.